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Declarations under Rule 4.17:
— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations*
— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations*

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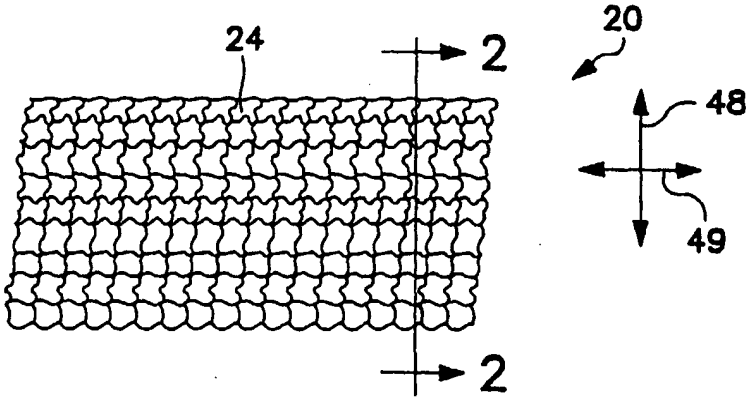
(54) Title: BIAXIALLY EXTENDIBLE MATERIAL



(57) Abstract: A biaxially extendible, breathable laminate having liquid barrier properties and low retractive force. The laminate includes a nonwoven web neck-stretched in a first direction to impart extendibility of the web in a second direction mutually perpendicular with the first direction, and a film that is extendible in the second direction. The film can be a breathable, microporous film, and either be an inelastic film stretched to form rugosities in the second direction, or can be made of an extendible polymer that is extendible in the second direction. Using an appropriate elastomeric lamination and/or creping adhesive, the laminate (20) is creped to produce extendibility in the first direction with some retractive force. The biaxial extendible laminate (20) is particularly useful as an outer cover for diapers and other personal care products.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B32B3/28 B32B27/12 B32B5/04 A61F13/15

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B32B A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3 719 540 A (HALL J) 6 March 1973 (1973-03-06) claims 1,3 column 1, line 65 -column 2, line 54 column 2, line 65 -column 3, line 15 column 3, line 43 -column 4, line 12 ---	1-59
A	US 6 159 584 A (EATON BRADLEY W ET AL) 12 December 2000 (2000-12-12) claims 1,26 column 2, line 59 -column 3, line 14 column 5, line 19 - line 48 column 10, line 33 -column 11, line 11 column 11, line 32 - line 65 --- -/--	1-59

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
21 August 2002	29/08/2002

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Girard, S

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/US 01/48328

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 3719540 A	06-03-1973	CA 951860 A1	30-07-1974
		DE 2121966 A1	25-11-1971
		FR 2088330 A5	07-01-1972
		GB 1333474 A	10-10-1973
US 6159584 A	12-12-2000	AU 745499 B2	21-03-2002
		AU 9214598 A	18-10-1999
		BR 9815770 A	21-11-2000
		CA 2326512 A1	30-09-1999
		CN 1291089 T	11-04-2001
		EP 1066008 A1	10-01-2001
		JP 2002507495 T	12-03-2002
		TW 442391 B	23-06-2001
		WO 9948455 A1	30-09-1999
		ZA 9902317 A	10-10-2000
WO 9702133 A	23-01-1997	AU 6389096 A	05-02-1997
		BR 9609747 A	16-07-2002
		CA 2222444 A1	23-01-1997
		CN 1200074 A	25-11-1998
		EP 0846056 A2	10-06-1998
		WO 9702133 A2	23-01-1997
US 5883028 A	16-03-1999	AU 736963 B2	09-08-2001
		AU 7595398 A	30-12-1998
		BR 9809520 A	20-06-2000
		CN 1258327 T	28-06-2000
		EP 0986665 A1	22-03-2000
		WO 9854389 A1	03-12-1998
		ZA 9804072 A	24-11-1998
WO 9522951 A	31-08-1995	US 5554145 A	10-09-1996
		AU 700813 B2	14-01-1999
		AU 1746395 A	11-09-1995
		BR 9506912 A	16-09-1997
		CA 2182873 A1	31-08-1995
		CN 1144472 A	05-03-1997
		CZ 9602469 A3	15-01-1997
		DE 69510923 D1	26-08-1999
		DE 69510923 T2	20-01-2000
		DK 748197 T3	29-11-1999
		EG 20605 A	30-09-1999
		EP 0748197 A1	18-12-1996
		ES 2133741 T3	16-09-1999
		FI 963355 A	28-08-1996
		GR 3030842 T3	30-11-1999
		HK 1012934 A1	23-06-2000
		HU 77402 A2	28-04-1998
		JP 9509350 T	22-09-1997
		NO 963555 A	25-10-1996
		SG 44635 A1	19-12-1997
		TR 28798 A	25-03-1997
		WO 9522951 A1	31-08-1995
		US 6325787 B1	04-12-2001
		US 5556394 A	17-09-1996
		US 5554143 A	10-09-1996
		US 5569232 A	29-10-1996
		US 5554144 A	10-09-1996

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/US 01/48328

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9522951 A		US 5947948 A	07-09-1999
		US 5749866 A	12-05-1998
		ZA 9501648 A	13-11-1996